Title (en)

DOPED ORGANIC ELECTROLUMINESCENT DEVICE AND METHOD FOR PREPARING SAME

Title (de)

DOTIERTE ORGANISCHE ELEKTROLUMINESZENTE VORRICHTUNG UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

DISPOSITIF ÉLECTROLUMINESCENT ORGANIQUE ET PROCÉDÉ DE PRÉPARATION DE CE DISPOSITIF

Publication

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Application

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Priority

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Abstract (en)

[origin: EP2787553A1] Disclosed is a doped organic electroluminescent device, comprising the following structures laminated in succession: a conductive anode substrate, a hole injecting layer, a hole transportation layer, an electron barrier layer, a light-emitting layer, an electron transportation layer, an electron injecting layer and a cathode; and the material for the electron barrier layer is a hole transportation material doped with a cerium salt. The material for an electron barrier layer in such a doped organic electroluminescent device is a hole transportation material doped with a cerium salt which has a low work function of approximately -2.0 eV and can effectively block electrons. By doping the cerium salt having a low work function into the hole transportation material as the electron barrier layer, the LUMO energy level of the hole transportation material is greatly increased, thereby elevating the potential barrier between the electron barrier layer and the light-emitting layer, so that it is difficult for the electrons to transit to the side of the hole transportation layer and a good electron barrier effect is achieved. The present invention also provides a method for preparing the doped organic electroluminescent device.

IPC 8 full level

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Citation (search report)

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- See also references of WO 2013078593A1

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